

Amendments to the Claims

1-23. (canceled)

24. (currently amended) A device ~~system~~, comprising:

a distributor unit in the device that distributes a plurality of packets and security association information associated with the plurality of packets according to a distribution scheme; and

a plurality of security processing engines in the device, coupled to the distributor unit, that perform authentication and cryptographic functions,

wherein the plurality of security processing engines receive at least a portion of the security association information associated with the packets, and wherein the plurality of security processing engines process the plurality of packets in parallel.

25. (currently amended) The device ~~system~~ of claim 24, wherein the plurality of packets are buffered prior to being processed by the plurality of security processing engines.

26. (currently amended) The device ~~system~~ of claim 24, further comprising a classification module that determines security association information associated with a plurality of packets, wherein the classification module is configured to provide at least a portion of the security information associated with the packets to the distributor unit.

27. (currently amended) The device ~~system~~ of claim 24, wherein the distributor unit and the plurality of security processing engines are on the same chip.

28. (currently amended) The device ~~system~~ of claim 24, wherein the security association information includes a sequence number, an anti-replay window, and a lifetime of the security association.

29. (currently amended) The device ~~system~~ of claim 28, wherein the security association information further includes an encapsulating security payload (ESP) encryption algorithm identifier and one or more ESP encryption keys.

30. (currently amended) The device ~~system~~ of claim 29, wherein the security association information further includes an ESP authentication algorithm identifier and one or more ESP authentication keys.

31. (currently amended) The device ~~system~~ of claim 28, wherein the security association information further includes an authentication header (AH) authentication algorithm identifier and one or more AH authentication keys.

32. (currently amended) The device ~~system~~ of claim 28, wherein the security association information includes protocol mode information.

33. (currently amended) The device ~~system~~ of claim 24, wherein the distribution scheme is a round-robin distribution scheme, wherein the distributor unit selects a next available security processing engine in a round-robin manner.

34. (currently amended) The device ~~system~~ of claim 24, further comprising an order maintenance packet retirement unit.

35. (currently amended) The device ~~system~~ of claim 34, wherein the distributor unit assigns packets for processing to a next available security processing engine

regardless of the order received and the order maintenance packet retirement unit outputs the processed packets such that packet order is maintained.

36. (currently amended) The device ~~system~~ of claim 24, wherein the system is a router.

37. (currently amended) The device ~~system~~ of claim 24, wherein the system is a firewall.

38. (currently amended) The device ~~system~~ of claim 24, wherein the system is a network communication device.

39. (currently amended) The device ~~system~~ of claim 24, wherein the system is a security gateway.

40. (currently amended) The device ~~system~~ of claim 24, wherein the system is a server.

41. (currently amended) The device ~~system~~ of claim 24, wherein the system is a network line card.